

Date: Friday, 05/09/2008 8:31:21 AM
 User: Jean-Luc Menard

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BLADE FITTING
Job Number	: 41853		
Estimate Number	: 12299		
P.O. Number	:	Part Number	: D3488041
This Issue	: 05/09/2008 S.O. No. :	Drawing Number	: D3488 / DSK101
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / /	Drawing Revision	: B / D
Previous Run	: 38786	Material	:
Written By	: <u>J. M. 08-05</u>	Due Date	: 12/09/2008 Qty: 20 Um: Each
Checked & Approved By	:		
Comment	: Est Rev:A New Issue 06-02-28 JLM Est Rev:B As per Rev B 06-03-30 JLM Est Rev:C Now On Doosan Lathe JLM Verified BY:DD		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6103003	Round Billet, Aluminum
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 20.0000 Each(s)
 Alluminum Round Billet D6103-003
 Batch: B41609

J.F. 08/09/11 (20)

2.0	DOOSAN LATHE	DOOSAN LATHE
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Comment: DOOSAN LATHE
 1-Turn as per Dwg DSK 101 & Folio FA625
 2-Deburr

J.F. 08/09/11 (20)

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 08/09/11 (20)

4.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA625 & Dwg D3488
 2-Deburr

J.L. 08/09/21 (19)

5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.L. 08/09/21 (19)

~~Input level, origin in. Let's not worry~~

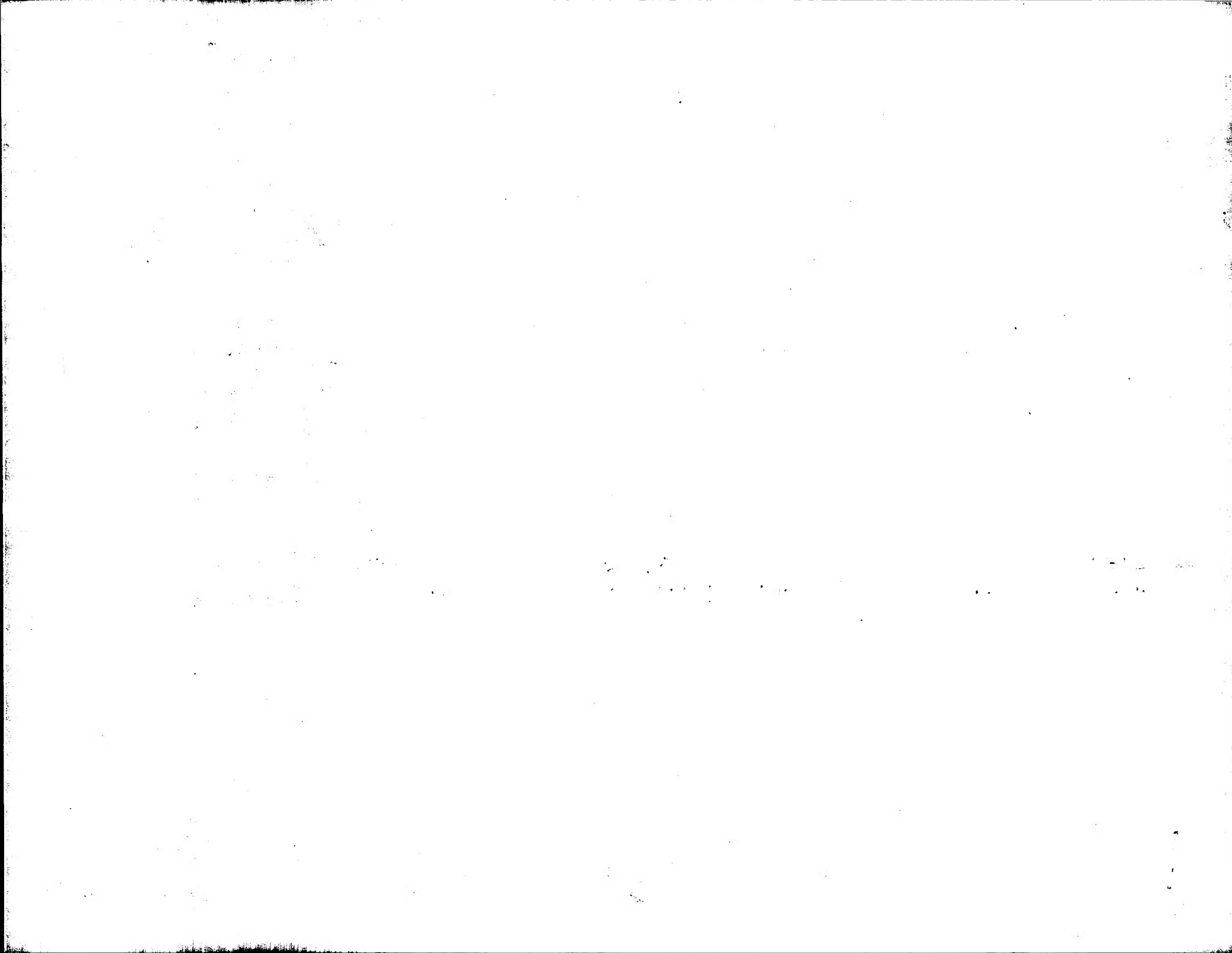
Input is accepted dimension. 125 is under tolerance
but origin was taken by operator
R.C operator error

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3488-041 PAR #: N/A Fault Category: Prod / Machined Part NCR: Yes No DQA: D Date: 08/01/20
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: D Date: 08/09/20

NCR: <u>41853</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
6/9/22	4.0	1 part scrap dimension .125 is under tol. E.C origin was taken ^{taken} incorrect by operator / operator error	<u>JE</u> 08.09.22 JLF JY2	Scrap and Destroy no replace Recommend scrap <u>JE</u> 08.09.22	<u>JE</u> J.L 08/09/22	<u>S</u> 08/09/22	<u>JE</u> 08/09/22	<u>S</u> 08/09/22

NOTE: Date & initial all entries



Date: Friday, 05/09/2008 8:31:21 AM
User: Jean-Luc Menard

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

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Job Number:



Seq. #: Machine Or Operation: Description :

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8/08/09/21 (19)

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M-L 08/09/22

(19X)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

10:00
320°C
10:30

M-L 08/09/25

(19X)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-09-25

(X19)

10.0

ALS71032225

INSERT



Comment: Qty.: 4.0000 Each(s)/Unit Total: 80.0000 Each(s)

Pick:

Qty Part Number Description Batch

4 ALS7-1032-225 Insert

M1100 621

M-L

11.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Inserts as per Dwg D3488

M-L 08/09/25

(19X)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/09/25 (+19)

MF 08-09-26

Date: Friday, 05/09/2008 8:31:21 AM
User: Jean-Luc Menard

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BLADE FITTING

Job Number: 41853

Part Number: D3488041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

PACKAGING 1

PACKAGING RESOURCE #1



14X

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

F-P 8

M-A

08/09/25

14.0

QC21

FINAL INSPECTION/W/O RELEASE



08/09/30

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-09-26

DART AÉROSPACE LTD	Work Order: 41853
Description: Blade Fitting, LH, RH	Part Number: 03488-1
Inspection Dwg: 03488, Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Lathe (DOOSAN) ☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø 2.150"	± .005"	Ø 2.150"				
Ø 2.780"	± .005"	Ø 2.780"				
Ø 3.125"	± .010"	Ø 3.125"				
Ø 3.346"	± .010"	Ø 3.346"				
.125 x 45°	± .010"	.115 x 45°				
8.000"	+ .030 - .030	8.000"				
9.250"	± .010"	9.250"				
.188"	± .010"	.188"				
R.032"	± .010"	R.032"				
R.062"	± .010"	R.062"				
Ø .297"	+ .005 - .001	Ø .299"				
Ø .430"	± .010"	Ø .432"				
.100"	± .010"	.105"				
.125"	± .010"	.127"				
2.620"	± .010"	2.619"				
3.500"	± .010"	3.500"				
1.005"	± .010"	1.004"				
Ø .484"	+ .005 - .001	Ø .485"				
1.180"	± .010"	1.181"				
3.150"	± .010"	3.151"				
3.070"	± .010"	3.070"				
8.000"	+ .030 - .030	8.005"				
R.063"	± .010"	R.063"				

Measured by: J.F.	Audited by: J.S.	Prototype Approval: N/A
Date: 08/09/11	Date: 08/09/21	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



DART AEROSPACE USA, INC.
PORT HADLOCK, WA

DESIGN
84

DRAWN BY
84

CHECKED
84

APPROVED
84

DRAWING NO.
DSK 101

REV. D
SHEET 1 OF 1

DATE
06.05.09

TITLE

06.05.09

D3488-1/-2 TURNING DETAIL

1:3

A

05.12.21

NEW ISSUE

B

06.03.02

ADD TOLERANCES AND RADIUS

C

06.04.17

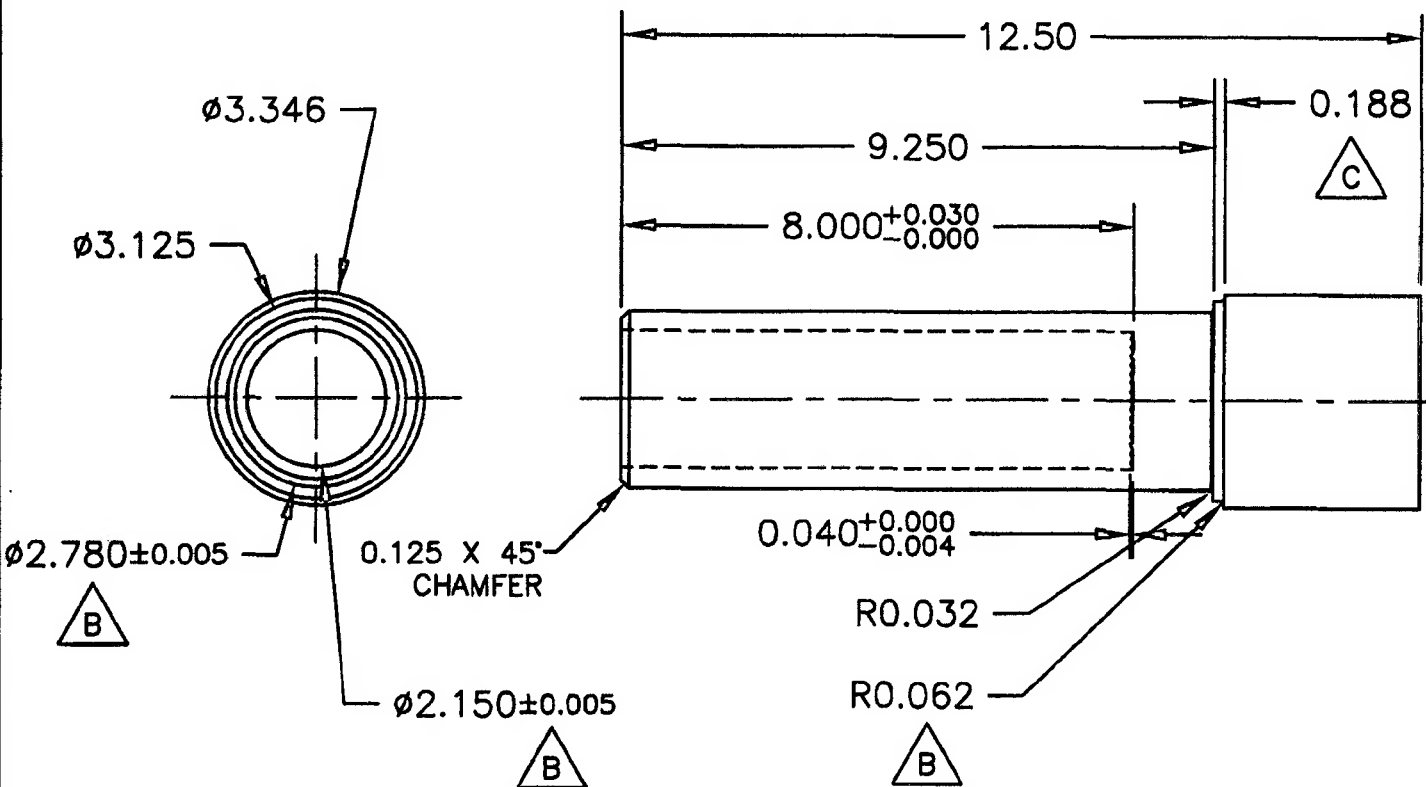
0.188 WAS 0.125

D

06.05.09

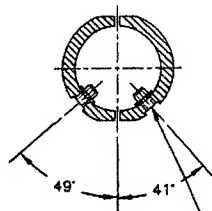
REMOVE DIAMETER FOR CHAMFER

W/0485



DSK 101

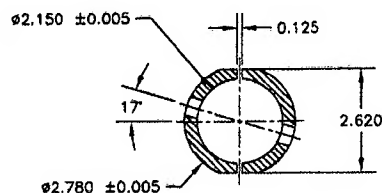
- 1) MATERIAL: MAKE FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- 2) FINISH: NONE
- 3) BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



SECTION B-B

Ø0.297
C BORE Ø0.430 x 0.100
INSTALL ALS4-1032-225 (OR AKS4-1032-225
OR ALS7-1032-225 OR AKS7-1032-225)
INSERTS AFTER FINISH
(4 PLACES)

4



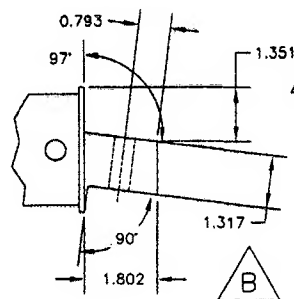
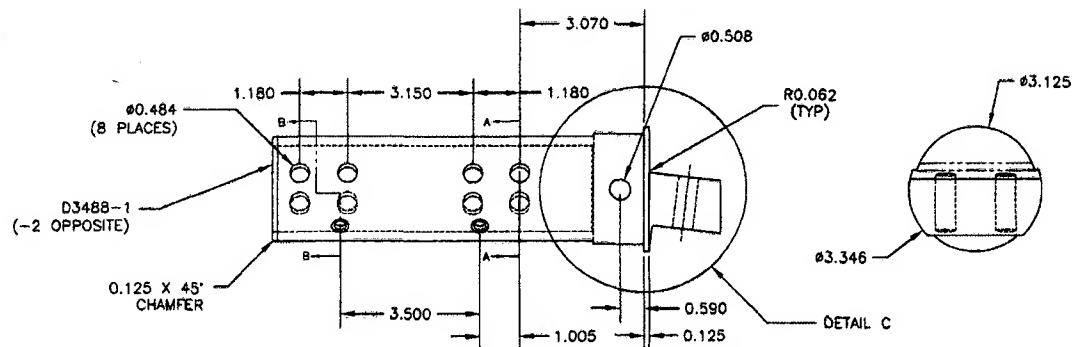
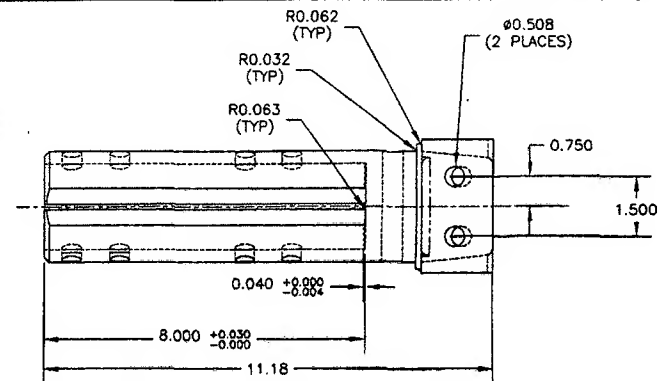
SECTION A-A

D3488-041/-042 BLADE FITTING ASSEMBLY PARTS LIST

QTY	QTY	PART NUMBER	DESCRIPTION
-041	-042		
X		D3488-041	BLADE FITTING ASSEMBLY (LH)
	X	D3488-042	BLADE FITTING ASSEMBLY (RH)
1		D3488-1	BLADE FITTING (LH)
	1	D3488-2	BLADE FITTING (RH)
4	4	ALS4-1032-225 or AKS4-1032-225 or ALS7-1032-225 or AKS7-1032-225	INSERT

D3488-041/-042 BLADE FITTING

- MATERIAL: MAKE D3488-1/-2 FROM ALUMINUM 7075-T7351 ROUND BAR PER QQ-A-225/9 (REF. DART MATERIAL SPEC M7075T73R)
- FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- BREAK UNMARKED SHARP EDGES 0.010 TO 0.020
- INSTALL INSERTS AFTER POWDER COAT
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



DETAIL C

D3488-041 SHOWN (D3488-042 OPPOSITE)

RELEASED
06-03-07 PH
REV D3
ECN #789

B	06.03.15	CHANGE THICKNESS
A	05.12.20	NEW ISSUE
DESIGN	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, MA
CHECKED	PH	DRAWING NO. D3488
DATE	06.03.15	TITLE BLADE FITTING
		REV. B SHEET 1 OF 1 SCALE 1:3

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